

SCOPUS

THE RESIDENTIAL STATUS OF THE MADAGASCAR BEE-EATER *MEROPS SUPERCILIOSUS* IN AFRICA

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One of the more interesting species of its genus is the Madagascar Bee-eater *Merops superciliosus*. With its allospecies *M. persicus* and *M. (s.) philippinus* it is strongly suspected to fish (Fry 1981). Its breeding distribution is unusual amongst Afrotropical birds and its migrations are mysterious.

Its status in East Africa has been clarified in Britton (1980), which states that it is widespread from May to September as a migrant from southeast Africa and perhaps Madagascar. Similar caution as to the provenance of these migrants, especially the notion that they are from Madagascar, has been expressed by Rand (1936), Benson (1960), Moreau (1966) and Clancey (1971); yet many people still regard the species as a straightforward migrant between Africa and Madagascar.

The purpose of this paper is to integrate more recent information with the full discussion of the problem by Clancey (1971). The conclusion may be anticipated by adding to Moreau's remark (1966, p. 252) that "large-scale migration of *Merops superciliosus* from Madagascar remains to be proved", that, in the author's view, there may be no such migration at all.

BREEDING DISTRIBUTION

On present evidence there are five reproductive foci of *M. superciliosus* in the Afrotropical Region, as shown in Fig. 1. Populations (i) and (ii) are quite discrete and (v) may be so; but there is probably movement and gene flow between (iii) and (iv) which should hence not be treated as similarly distinct from each other.

(i) In southwestern Africa *M. s. alternans* Clancey is abundant along the lower Cunene River, breeding there and probably in the desert coastal strip north of its mouth (Lucira) and north to the lower Cuanza River. The race ranges in the south to Ondagua, Ovamboland, in the east to the valley of the Okavango River and in the north to about Luanda.

(ii) In the Guban area of northwest Somalia there resides a population morphologically indistinguishable from the nominate race but breeding much earlier in the year than it. The species is common and widespread there, nesting being known at Saad-ed-Din Island, Bulhar and Saba Wanak on the coast and at Sheikh, Burao and Oadweina in the hinterland (Archer & Godman 1961, whose records were inadvertently omitted from Map 310 of Snow 1978). Two more recent breeding records - a colony of 20 nests, and three pairs feeding fledglings, which may be ascribed to this population, are from the Awash valley, Ethiopia (J.S. Ash in litt.).

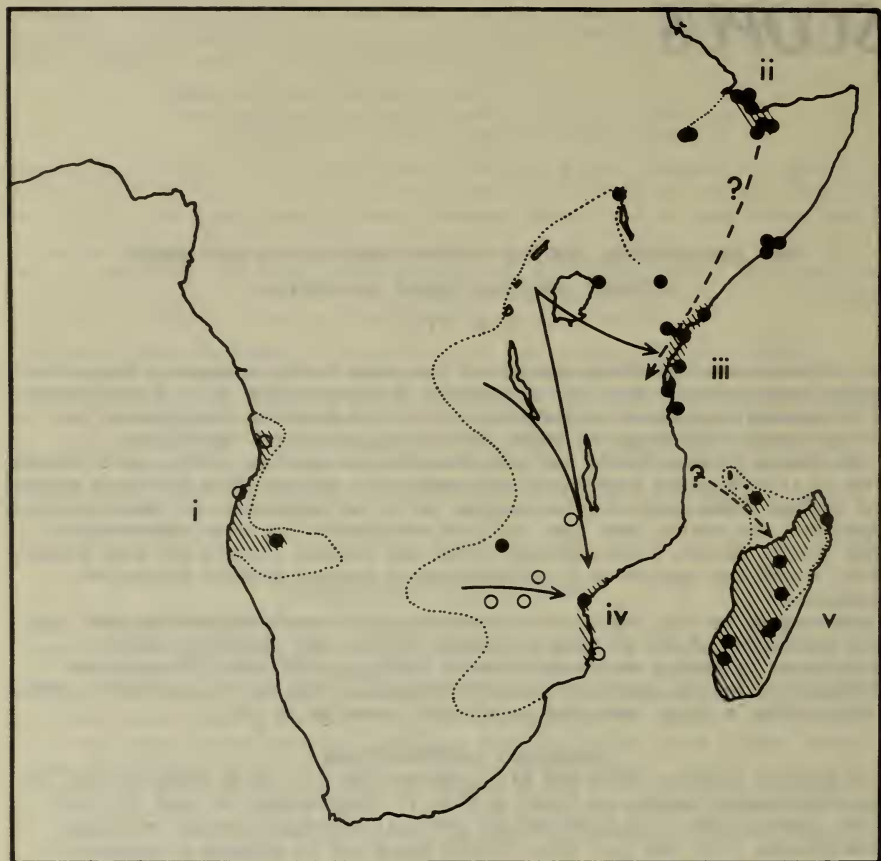


Fig. 1. The Afrotropical range of *Merops superciliosus*. Hatched areas (i) to (v) are the main breeding foci (see text); filled circles, known nesting, open circles, probable nesting. Dotted lines, approximate non-breeding ranges.

Arrows, pre-breeding migrations.

(iii) Breeding of *M. s. superciliosus* on the East African coast has been reported to occur with any regularity only on Pemba Island (Pakenham 1979). It is likely to nest regularly also in the Lamu archipelago and adjacent Kenya coast (although nesting has only once been found there), and around Mogadishu. Breeding colonies or indications of breeding have been reported once each on or near the coast at Malindi, on the Galana River, near Dar es Salaam and on Mafia Island, and inland near Kisumu, on the upper Tana River, and perhaps on the Athi River; also near the Omo River north of Lake Turkana and at three localities near Mogadishu on the Somali coast (J.S. Ash *in litt.*). The last records, geographically isolated, could almost as easily refer to population (ii) as to (iii).

(iv) On the African coast of the Moçambique Channel the nominate race has nested at Masambeti near Beira, and it probably breeds regularly and numerously from that area south to Bazaruto and Santa Carolina Islands (22° and 23°S). Inland, a colony has been found on the Zambezi at Mana Pools (Zimbabwe) and an evident fledgling near Furancungo (Moçambique) (Brooke & Hougaard 1971). There are Zimbabwe nest record cards, marked 'European Bee-eater' (*M. apiaster*), and dated 1921, 1928 and 1953 at Wedza (100 km southeast of Salisbury) and 1956 at Fort Victoria. The author of the 1953 and 1956 records now feels that his identification must have been erroneous (*in litt. per* M. Donnelly) and the first two records are also unacceptable as *M. apiaster* (M.P.S. Irwin, *in litt.*). In point of fact, all four very probably mean *M. superciliosus*. In addition, there is an unconfirmed report of a 1980 nesting colony of *M. superciliosus* near Bulawayo.

In areas (iii) and (iv) breeding inland appears to be sporadic, and the species has been described as abundant in the breeding season only within the hatched coastal zones shown in Fig. 1, namely at Lamu, Pemba, Masambeti and Sta. Carolina.

(v) The nominate race is widespread and common as a breeding bird in the Malagasy Subregion, on Madagascar and Mayotte Island (Comoro archipelago).

BREEDING SEASONS AND MIGRATIONS

(i) *M. s. alternans* lays in November-December; whether and to what extent it is migratory within its rather circumscribed range is not known.

(ii) *M. s. superciliosus* lays in April on the north Somali coast and in May inland at 1400 m altitude (Archer & Godman 1961). The birds were seen in all seasons and were thought to be entirely sedentary in the Guban area. Nonetheless, it is possible that this population contributes to the East African presence (see below). On the Awash River laying is from mid April to late May.

(iii) Inferred egg-laying times, by climatic regions (see Brown & Britton 1980, Map 1), are: Region B, Kano Plains near Kisumu, April-May; Region C, Momela Crater Lake, early September (Britton 1979); Region D, upper Tana River, early August (Bullock & Bullock 1976 - not January-February as given by Pakenham 1979), Galana River at Sala, early May (Lack, Leuthold & Smeenk 1980), Dar es Salaam, March, Mafia Island, September, Pemba Island, late June to early August, Omo Valley, April-May, and near Mogadishu, April-May; Region E, Malindi, late November - early December, Lamu, late November.

It occurs all year in southern Somalia but is not necessarily sedentary there (J.S. Ash *in litt.*). On the Kenya coast the species occurs erratically throughout the year and at Lamu abundantly in August - September (Britton 1980). Pakenham (1979) found it on Pemba in at least nine months (not April or May), and commonly in mangrove roosts for four or five months after the breeding season; but on nearby Zanzibar Island, where nesting has not yet been found, it occurs only from May to November. Also close by, it visits Dar es Salaam in March - August, and further south near the coast at Mikindani occurs only in July - August (Britton 1980), presumably on passage. In Tsavo East and Tsavo West and in the region to the north, flocks occur in February and March, and further inland the bird is a visitor from May to September, west to the Albertine Rift and north to Kidepo Valley. P.C. Lack and D.J. Pearson have noted (*in litt.*) that the Tsavo and east Kenyan bushland birds in February - March are in fresh plumage, leading them to suggest that the birds might be pre-breeding migrants bound for Somalia. The idea receives some support from Pearson's additional observation that these east Kenyan bee-eaters seem to prefer drier habitats, like the Somali ones (Archer

& Godman 1961), than do the birds found later in the year around Lake Victoria; perhaps the latter are from the wetter area (iv).

(iv) Egg-laying at Masambeti was in October, at Mana Pools in September, at Wedza in late October - early November, and at Fort Victoria in early December. Madagascar Bee-eaters are regular non-breeding visitors to the eastern Congo savannas from late April to August, and are passage migrants in Zambia and Malaŵi from late August to early October, mainly in September, and (less commonly) in April and May.

(v) On Mayotte egg-laying is in early November and in Madagascar in early September (once) and in October (often). The species has been seen on Mayotte in February (common), May, and August - November (common). On Madagascar it is present in all months and remains common in May - September (M. Nicholl, pers. comm.) when, it was formerly supposed, part of the population is wintering in Africa (data from Benson 1960 and Benson, Colebrook-Robjent & Williams 1976).

DISCUSSION

It is still impossible to draw firm conclusions about the status and migrations of *Merops superciliosus* in Africa. However, the above data for areas (iii) and (iv) are broadly consonant with some post-breeding dispersal west, and perhaps north, from area (iii) and west and north from area (iv), and with temporally and spatially more concentrated pre-nuptial migrations back again (unbroken arrows in Fig. 1) to essentially coastal breeding stations.

All populations of the Blue-cheeked Bee-eater *M. persicus* and the Oriental Blue-tailed Bee-eater *M. (s.) philippinus*, both very close relatives of *Merops superciliosus*, are highly migratory; in fact they are probably the most migratory of all bee-eaters except *M. apiaster*. It makes it likely that *M. s. superciliosus* in area (ii) is not quite as sedentary as was argued by Archer & Godman (1961). It also means that Malagasy birds may move in part to Africa for their non-breeding season as conventionally supposed; elsewhere, in the Red Sea for example, the superspecies readily crosses water. But there is no need to invoke migration from the Malagasy Subregion to explain adequately the picture of intra-African migrations, and since some evidence suggests that Madagascar Bee-eaters are sedentary in Madagascar it seems safer to put the idea of their crossing to Africa in obedience until better evidence for it should arise.

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SUMMARY

Fig. 1 summarizes the distributional data assembled, and shows inferred pre-nuptial migrations of *Merops superciliosus*. Migration between Africa and Madagascar need not be invoked.

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